

SEQUENCE LISTING

<110> CORY, SUZANNE
 ADAMS, JERRY
 HUANG, DAVID C.S.
 O'CONNOR, LIAM
 STRASSER, ANDREAS
 PUTHALAKATH, HAMSA
 O'REILLY, LORRAINE

RECEIVED

OCT 1 7 2001

TECH CENTER 1600/2900

<120> NOVEL THERAPEUTIC MOLECULES

<130> 017227/0159

<140> 09/508,832

<141> 2000-07-10

<150> PCT/AU98/00772

<151> 1998-09-17

<150> AU PO 9263

<151> 1997-09-17

<150> AU PO 9373

<151> 1997-09-24

<160> 39

<170> PatentIn Ver. 2.1

<210> 1

<211> 332

<212> DNA

<213> Mus sp.

<220>

<221> CDS

<222> (1)..(330)

<400> 1

atg gcc aag caa cct tct gat gta agt tct gag tgt gac aga gga ggt 48
Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly
1 10 15

gga caa ttg cag cct gct gag agg cct ccc cag ctc agg cct ggg gcc 96
Gly Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala
20 25 30

cct acc tcc cta cag aca gaa ccg caa gct tcc ata cga cag tct cag
Pro Thr Ser Leu Gln Thr Glu Pro Gln Ala Ser Ile Arg Gln Ser Gln
35 40 45

gag gaa cct gaa gat ctg cgc ccg gag ata cgg att gca cag gag ctg 192 Glu Glu Pro Glu Asp Leu Arg Pro Glu Ile Arg Ile Ala Gln Glu Leu 50 55 60

B²

```
cgg cgg atc gga gac gag ttc aac gaa act tac aca agg agg gtg ttt
Arg Arg Ile Gly Asp Glu Phe Asn Glu Thr Tyr Thr Arg Arg Val Phe
                     70
gca aat gat tac cgc gag gct gaa gac cac cct caa atg gtt atc tta
                                                                   288
Ala Asn Asp Tyr Arg Glu Ala Glu Asp His Pro Gln Met Val Ile Leu
                 85
caa ctg tta cgc ttt atc ttc cgt ctg gta tgg aga agg cat tg
Gln Leu Leu Arg Phe Ile Phe Arg Leu Val Trp Arg Arg His
                                105
            100
<210> 2
<211> 110
<212> PRT
<213> Mus sp.
Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly
Gly Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala
                                 25
Pro Thr Ser Leu Gln Thr Glu Pro Gln Ala Ser Ile Arg Gln Ser Gln
Glu Glu Pro Glu Asp Leu Arg Pro Glu Ile Arg Ile Ala Gln Glu Leu
Arg Arg Ile Gly Asp Glu Phe Asn Glu Thr Tyr Thr Arg Arg Val Phe
Ala Asn Asp Tyr Arg Glu Ala Glu Asp His Pro Gln Met Val Ile Leu
Gln Leu Leu Arg Phe Ile Phe Arg Leu Val Trp Arg Arg His
            100
<210> 3
<211> 422
<212> DNA
<213> Mus sp.
<220>
<221> CDS
<222> (1)..(420)
<400> 3
atg gcc aag caa cct tct gat gta agt tct gag tgt gac aga gaa ggt
Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly
qqa caa ttg cag cct gct gag agg cct ccc cag ctc agg cct ggg gcc
                                                                   96
Gly Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala
             20
                                 25
```

B2

								ccc Pro	144
								gcc Ala	192
								gag Glu	240
								cgg Arg 95	288
								gca Ala	336
								caa Gln	384
		_	_	_	 _	agg Arg	tg		422

<210> 4
<211> 140
<212> PRT
<213> Mus sp.

<400> 4

Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly
1 1 5 10 15

Gly Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala 20 25 30

Pro Thr Ser Leu Gln Thr Glu Pro Gln Asp Arg Ser Pro Ala Pro Met 35 40 45

Ser Cys Asp Lys Ser Thr Gln Thr Pro Ser Pro Pro Cys Gln Ala Phe 50 60

Asn His Tyr Leu Ser Ala Met Ala Ser Ile Arg Gln Ser Gln Glu Glu 65 70 75 80

Pro Glu Asp Leu Arg Pro Glu Ile Arg Ile Ala Gln Glu Leu Arg Arg 85 90 95

Asp Tyr Arg Glu Ala Glu Asp His Pro Gln Met Val Ile Leu Gln Leu

120 Leu Arg Phe Ile Phe Arg Leu Val Trp Arg Arg His 135 <210> 5 <211> 590 <212> DNA <213> Mus sp. <220> <221> CDS <222> (1)..(588) atg gcc aag caa cct tct gat gta agt tct gag tgt gac aga gaa ggt Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly gga caa ttg cag cct gct gag agg cct ccc cag ctc agg cct ggg gcc Gly Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala 144 cct acc tcc cta cag aca gaa ccg caa ggt aat ccc gac ggc gaa ggg Pro Thr Ser Leu Gln Thr Glu Pro Gln Gly Asn Pro Asp Gly Glu Gly 40 gac ege tge eec cae gge age eet eag gge eeg etg gee eea eeg gee 192 Asp Arg Cys Pro His Gly Ser Pro Gln Gly Pro Leu Ala Pro Pro Ala 55 age eet gge eet ttt get ace aga tee eea ett tte ate ttt gtg aga 240 Ser Pro Gly Pro Phe Ala Thr Arg Ser Pro Leu Phe Ile Phe Val Arg 70 75 aga tot tot otg otg too ogg too too agt ggg tat too tot tit gac 288 Arg Ser Ser Leu Leu Ser Arg Ser Ser Ser Gly Tyr Phe Ser Phe Asp aca gac agg age eeg gea eee atg agt tgt gac aag tea aca eaa ace 336 Thr Asp Arg Ser Pro Ala Pro Met Ser Cys Asp Lys Ser Thr Gln Thr cca agt cct cct tgc cag gcc ttc aac cac tat ctc agt gca atg gct 384 Pro Ser Pro Pro Cys Gln Ala Phe Asn His Tyr Leu Ser Ala Met Ala 120 tcc ata cga cag tct cag gag gaa cct gaa gat ctg cgc ccg gag ata 432 Ser Ile Arg Gln Ser Gln Glu Glu Pro Glu Asp Leu Arg Pro Glu Ile 135 cgg att gca cag gag ctg cgg cgg atc gga gac gag ttc aac gaa act Arg Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Glu Thr

155

150

By

				3							
tac aca agg Tyr Thr Arg											528
cct caa atg Pro Gln Met	gti atc Val Ile 180	tta caa Leu Gln	ctg tta Leu Leu 189	ı Arg	ttt Phe	atc	ttc Phe	cgt Arg 190	ctg Leu	gta Val	576
tgg aga agg Trp Arg Arg 195	His										590
<210> 6 <211> 196 <212> PRT <213> Mus sp	· ·										
<400> 6 Met Ala Lys 1	Gln Pro 5	Ser Asp	Val Se:	r Ser 10	Glu	Cys	Asp	Arg	Glu 15	Gly	
Gly Gln Leu	Gln Pro 20	Ala Glu	Arg Pro		Gln	Leu	Arg	Pro 30	Gly	Ala	-
Pro Thr Ser	Leu Gln	Thr Glu	Pro Gli 40	n Gly	Asn	Pro	Asp 45	Gly	Glu	Gly	
Asp Arg Cys 50	Pro His	Gly Ser 55	Pro Gli	n Gly	Pro	Leu 60	Ala	Pro	Pro	Ala	
Ser Pro Gly 65	Pro Phe	Ala Thr 70	Arg Se	r Pro	Leu 75	Phe	Ile	Phe	Val	Arg 80	
Arg Ser Ser	Leu Leu 85	Ser Arg	Ser Se	r Ser 90	Gly	Tyr	Phe	Ser	Phe 95	Asp	
Thr Asp Arg	Ser Pro 100	Ala Pro	Met Se		Asp	Lys	Ser	Thr 110	Gln	Thr	
Pro Ser Pro 115	Pro Cys	Gln Ala	Phe Asi	n His	Tyr	Leu	Ser 125	Ala	Met	Ala	
Ser Ile Arg 130	Gln Ser	Gln Glu 135	Glu Pro	o Glu	Asp	Leu 140	Arg	Pro	Glu	Ile	
Arg Ile Ala 145	Gln Glu	Leu Arg 150	Arg Il	e Gly	Asp 155	Glu	Phe	Asn	Glu	Thr 160	
Tyr Thr Arg	Arg Val 165	Phe Ala	Asn As	p Tyr 170	Arg	Glu	Ala	Glu	Asp 175	His	
Pro Gln Met	Val Ile 180	Leu Gln	Leu Le	_	Phe	Ile	Phe	Arg 190	Leu	Val	
Trp Arg Arg 195	His										

BA

```
<210> 7
<211> 416
<212> DNA
<213> Homo sapiens
<220>
<221> CDS
<222> (1)..(414)
<400> 7
atg gca aag caa cct tct gat gta agt tct gag tgt gac cga gaa ggt
Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly
aga caa ttg cag cct gcg gag agg cct ccc cag ctc aga cct ggg gcc
Arg Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala
             20
cet ace tee eta cag aca gag cea caa gac agg age cea gea cee atg
Pro Thr Ser Leu Gln Thr Glu Pro Gln Asp Arg Ser Pro Ala Pro Met
                             40
agt tgt gac aaa tca aca caa acc cca agt cct cct tgc cag gcc ttc
Ser Cys Asp Lys Ser Thr Gln Thr Pro Ser Pro Pro Cys Gln Ala Phe
                         55
aac cac tat ctc agt gca atg gct tcc atg agg cag gct gaa cct gca
Asn His Tyr Leu Ser Ala Met Ala Ser Met Arg Gln Ala Glu Pro Ala
                     70
gat atg cgc cca gag ata tgg atc gcc caa gag ttg cgg cgt atc gga
                                                                   288
Asp Met Arg Pro Glu Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly
gac gag ttt aac gct tac tat gca agg agg gta ttt ttg aat aat tac
                                                                   336
Asp Glu Phe Asn Ala Tyr Tyr Ala Arg Arg Val Phe Leu Asn Asn Tyr
                                105
caa gca gcc gaa gac cac cca cga atg gtt atc tta cga ctg tta cgt
                                                                   384
Gln Ala Ala Glu Asp His Pro Arg Met Val Ile Leu Arg Leu Leu Arg
                            120 .
                                                                   416
tac att gtc cgc ctg gtg tgg aga atg cat tg
Tyr Ile Val Arg Leu Val Trp Arg Met His
                        135
    130
<210> 8
<211> 138
<212> PRT
<213> Homo sapiens
<400> 8
Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly
```

BH

Arg Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala Pro Thr Ser Leu Gln Thr Glu Pro Gln Asp Arg Ser Pro Ala Pro Met Ser Cys Asp Lys Ser Thr Gln Thr Pro Ser Pro Pro Cys Gln Ala Phe Asn His Tyr Leu Ser Ala Met Ala Ser Met Arg Gln Ala Glu Pro Ala Asp Met Arg Pro Glu Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala Tyr Tyr Ala Arg Arg Val Phe Leu Asn Asn Tyr 100 105 Gln Ala Ala Glu Asp His Pro Arg Met Val Ile Leu Arg Leu Leu Arg 120 Tyr Ile Val Arg Leu Val Trp Arg Met His 135 130 <210> 9 <211> 596 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (1)..(594) <400> 9 atg gca aag caa cct tct gat gta agt tct gag tgt gac cga gaa ggt Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly aga caa ttg cag cct gcg gag agg cct ccc cag ctc aga cct ggg gcc Arg Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala cct acc tcc cta cag aca gag cca caa ggt aat cct gaa ggc aat cac Pro Thr Ser Leu Gln Thr Glu Pro Gln Gly Asn Pro Glu Gly Asn His gga ggt gaa ggg gac agc tgc ccc cac ggc agc cct cag ggc ccg ctg Gly Gly Glu Gly Asp Ser Cys Pro His Gly Ser Pro Gln Gly Pro Leu gcc cca cct gcc agc cct ggc cct ttt gct acc aga tcc ccg ctt ttc 240 Ala Pro Pro Ala Ser Pro Gly Pro Phe Ala Thr Arg Ser Pro Leu Phe atc ttt atg aga aga tcc tcc ctg ctg tct cga tcc tcc agt ggg tat 288 Ile Phe Met Arg Arg Ser Ser Leu Leu Ser Arg Ser Ser Ser Gly Tyr 90 85

ttc Phe	tct Ser	ttt Phe	gac Asp 100	aca Thr	gac Asp	agg Arg	agc Ser	cca Pro 105	gca Ala	ccc Pro	atg Met	agt Ser	tgt Cys 110	gac Asp	aaa Lys	336
tca Ser	aca Thr	caa Gln 115	acc Thr	cca Pro	agt Ser	cct Pro	cct Pro 120	tgc Cys	cag Gln	gcc Ala	ttc Phe	aac Asn 125	cac His	tat Tyr	ctc Leu	384
agt Ser	gca Ala 130	atg Met	gct Ala	tcc Ser	atg Met	agg Arg 135	cag Gln	gct Ala	gaa Glu	cct Pro	gca Ala 140	gat Asp	atg Met	cgc Arg	cca Pro	432
														ttt Phe		480
gct Ala	tac Tyr	tat Tyr	gca Ala	agg Arg 165	agg Arg	gta Val	ttt Phe	ttg Leu	aat Asn 170	aat Asn	tac Tyr	caa Gln	gca Ala	gcc Ala 175	gaa Glu	528
														gtc Val		576
_	gtg Val		_	_		tg										596

<210> 10 <211> 198 <212> PRT <213> Homo sapiens

<400> 10 Met Ala Lys Gln Pro Ser Asp Val Ser Ser Glu Cys Asp Arg Glu Gly

Arg Gln Leu Gln Pro Ala Glu Arg Pro Pro Gln Leu Arg Pro Gly Ala

Pro Thr Ser Leu Gln Thr Glu Pro Gln Gly Asn Pro Glu Gly Asn His

Gly Gly Glu Gly Asp Ser Cys Pro His Gly Ser Pro Gln Gly Pro Leu

Ala Pro Pro Ala Ser Pro Gly Pro Phe Ala Thr Arg Ser Pro Leu Phe 75

Ile Phe Met Arg Arg Ser Ser Leu Leu Ser Arg Ser Ser Ser Gly Tyr

Phe Ser Phe Asp Thr Asp Arg Ser Pro Ala Pro Met Ser Cys Asp Lys 105 100

```
Ser Thr Gln Thr Pro Ser Pro Pro Cys Gln Ala Phe Asn His Tyr Leu
                            120
Ser Ala Met Ala Ser Met Arg Gln Ala Glu Pro Ala Asp Met Arg Pro
                        135
Glu Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn
Ala Tyr Tyr Ala Arg Arg Val Phe Leu Asn Asn Tyr Gln Ala Ala Glu
                165
Asp His Pro Arg Met Val Ile Leu Arg Leu Leu Arg Tyr Ile Val Arg
                                185
            180
Leu Val Trp Arg Met His
        195
<210> 11
<211> 8
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
      peptide
Asp Tyr Lys Asp Asp Asp Lys
<210> 12
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      peptide
<400> 12
Glu Tyr Met Pro Met Glu
  1
<210> 13
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      peptide
```

```
<400> 13
Leu Arg Arg Ile Gly Asp Glu
<210> 14
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 14
                                                                    27
tgggagaaca gggtacatcg atgcggg
<210> 15
<211> 22
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 15
                                                                    22
gtgaactggg agcggattgt gg
<210> 16
<211> 28
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 16
                                                                    28
cacctgcaca ccgcgatcca ggataacg
<210> 17
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 17
                                                                    24
aggatccacc atggccaagc aacc
<210> 18
<211> 36
<212> DNA
<213> Artificial Sequence
```

Bh

```
<223> Description of Artificial Sequence: Primer
<400> 18
                                                                    36
gttctagatc agcacatctc tctgggatag aaccac
<210> 19
<211> 28
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 19
                                                                    28
gcaagcttcc tgtgcaatcc gtatctcc
<210> 20
<211> 30
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 20
                                                                    30
ggaagettge aacgaaactt acacaaggtg
<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 21
                                                                    24
gcaagcttcc gggcgcagat cttc
<210> 22
<211> 28
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 22
                                                                    28
caaagettee tgtgcaatee gtatetee
<210> 23
<211> 30
<212> DNA
```

```
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 23
                                                                    30
ggaagctttg aacgaaactt acacaaggtg
<210> 24
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 24
                                                                    24
caaagcttcc gggcgcagat cttc
<210> 25
<211> 28
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 25
                                                                    28
taagttctga gtgtgacaga gaaggtgg
<210> 26
<211> 28
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 26
                                                                    28
cagttgtaag ataaccattt gagggtgg
<210> 27
<211> 18
<212> PRT
<213> Homo sapiens
<400> 27
Val Val His Leu Thr Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg Arg
                  5
Tyr Arg
<210> 28
```

\frac{\frac{1}{2}}{2}

```
<211> 18
<212> PRT
<213> Homo sapiens
Ala Val Lys Gln Ala Leu Arg Glu Ala Gly Asp Glu Phe Glu Leu Arg
Tyr Arg
<210> 29
<211> 18
<212> PRT
<213> Homo sapiens
Pro Leu His Gln Ala Met Arg Ala Ala Gly Asp Glu Phe Glu Thr Arg
Phe Arg
<210> 30
<211> 18
<212> PRT
<213> Homo sapiens
Lys Ala Leu Glu Thr Leu Arg Arg Val Gly Asp Gly Val Gln Arg Asn
His Glu
<210> 31
<211> 18
<212> PRT
<213> Homo sapiens
<400> 31
Lys Leu Ser Glu Cys Leu Lys Arg Ile Gly Asp Glu Leu Asp Ser Asn
Met Glu
<210> 32
<211> 18
<212> PRT
<213> Homo sapiens
<400> 32
Gln Val Gly Arg Gln Leu Ala Ile Ile Gly Asp Asp Ile Asn Arg Arg
Tyr Asp
```

.

```
<210> 33
<211> 18
<212> PRT
<213> Homo sapiens
<400> 33
Arg Tyr Gly Arg Glu Leu Arg Arg Met Ser Asp Glu Phe Val Asp Ser
Phe Lys
<210> 34
<211> 18
<212> PRT
<213> Homo sapiens
Ala Leu Ala Leu Arg Leu Ala Cys Ile Gly Asp Glu Met Asp Val Ser
                                      10
Leu Arg
<210> 35
<211> 18
<212> PRT
<213> Homo sapiens
Asn Ile Ala Arg His Leu Ala Gln Val Gly Asp Ser Met Asp Arg Ser
                  5
Ile Pro
<210> 36
<211> 18
<212> PRT
<213> Homo sapiens
<400> 36
Leu Thr Ala Ala Arg Leu Lys Ala Leu Gly Asp Glu Leu His Gln Arg
Thr Met
<210> 37
<211> 18
<212> PRT
<213> Homo sapiens
<400> 37
Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala Tyr
                  5
```

```
Tyr Ala
```

<210> 38 <211> 20

<212> PRT

<213> Homo sapiens

<400> 38

Met Arg Pro Glu Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp 1 5 10 15

Glu Phe Asn Ala

<210> 39

<211> 20

<212> PRT

<213> Caenorhabditis elegans

<400> 39

Gln Glu Glu Thr Ile Arg Trp Ala Gln Glu Leu Arg Leu Arg Cys Leu 1 5 10 15

Val Thr Thr Arg

20

an diagonal Distribution of Armadol and

100